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THE REACTIONS OF ALKYLATION OF CARBOXYLATE PHOSPHABETAINES

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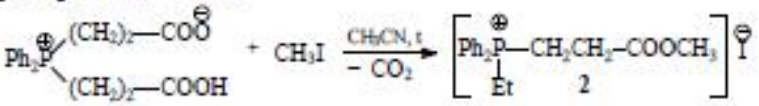
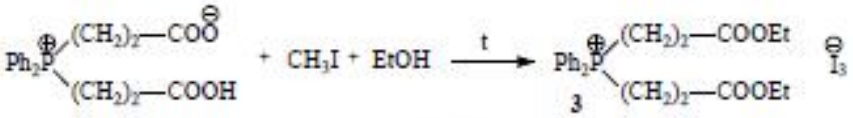
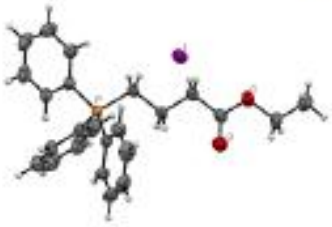
Alkylation of monocarboxylate betaine leads to the formation of phosphonium salt **1**. The structure of obtained compound has been confirmed by spectral methods and X-ray diffraction analysis (pic.1).

In the case of reaction proceeding in the media of acetonitrile under heating, decarboxylation occurs with the formation of phosphonium salt **2**.



Similar reaction of dicarboxylate phosphabetaine proceeds slightly different. The final product of the reaction of alkylation depends on conditions. In the case of using of ethanol as a solvent the alkylation reaction of dicarboxylate betaine with methyl iodide leads to the formation of phosphonium salt which contains two ester groups. The structure of phosphonium salt 3 has been confirmed by a single crystal X-ray diffraction studies.





Picture 1. Molecular structure of (4-ethoxy-4-oxobutyl)triphenylphosphonium iodide 1 in the crystal

Picture 2. Molecular structure of bis(3-ethoxy-3-oxopropyl)diphenylphosphonium triiodone 3 in the crystal

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